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Designation: gdrtxa03b-11
Last updated: 8/2/23
Source: Holzforschung Austria
Editor: HFA, SP

Intermediate floor - gdrtxa03b-11

intermediate floor, timber frame construction, suspended, dry, without filling, other surface

Performance rating

Fire protection performance	**REI**	60

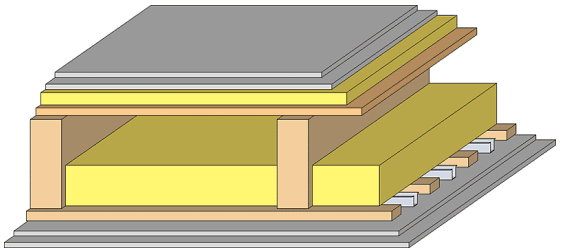
Classified by HFA

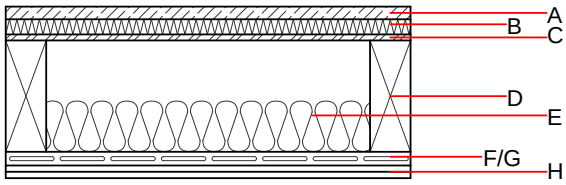
Germany

Load $E_{d,fi}$ according to the German certification document

Thermal performance	**U**	
	Diffusion	suitable
Acoustic performance	**R_w ($C;C_{tr}$)**	64(-3;-10) dB
	$L_{n,w}$ (C_I)	55(0)
Mass per unit area	**m**	75.40 kg/m²

Calculation based on gypsum plaster board type DF





Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal performance				Reaction to fire
			λ	μ min – max	ρ	c	EN
A	25.0	dry screed	0.210	8	900	1.050	A1
B	30.0		0.040	1	180	1.030	A1
C	18.0	OSB	0.130	200	600	1.700	D
D	240.0	construction timber (80/..; e=625) (80/..; e=*)	0.120	50	450	1.600	D
E	100.0	mineral wool [040; 30; ≥1000°C]	0.040	1	30	1.030	A1
F	24.0	spruce wood cladding with spacing of cladding boards(24/100); a=400	0.120	50	450	1.600	D
G	27.0	resilient channel (placed between open formwork)	0.156				
H	25.0	gypsum plaster board type DF (2x12,5 mm) or	0.250	10	800	1.050	A2
H	25.0	gypsum fibre board (2x12,5 mm)	0.320	21	1000	1.100	A2

Sustainability rating (per m²)

Database ecoinvent

$OI3_{Kon}$	34.8

Calculated by HFA

Database GaBi (ÖKOBAUDAT)

Built-in renewable materials	**kg**	28.850
Biogenic carbon in kg CO_2-e.	**kg CO_2**	43.060
Energy use of Primary Energy	**MJ**	688.410
Share of renewable PE	**%**	21.68

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO_2-e.]	AP [kg SO_2-e.]	EP [kg PO_4-e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.153	0.053	2,32E-6	0.050	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	94.775	427.382	522.158	469.346	16.832	486.178

Database GaBi (ÖKOBAUDAT)

Lifecycle (Phases)	GWP [kg CO_2-e.]	AP [kg SO_2-e.]	EP [kg PO_4-e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.124	0.019	8,81E-7	0.022	
C1 - C4		0.006	0.003	8,68E-8	0.001	
A1 - C4		0.133	0.023	9,83E-7	0.023	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	146.950	510.180	658.660	509.620	19.580	529.340
C1 - C4	1.530	-498.590	-497.070	18.420	-7.740	10.670
A1 - C4	149.240	12.110	162.870	539.170	11.940	551.260